

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Axel ULLRICH et al.
Title: CLK PROTEIN KINASES AND RELATED PRODUCTS AND METHODS
Prior Appl. No. 09/905,999
Prior Appl. Filing Date: 07/17/2001
Examiner: Unassigned
Art Unit: Unassigned

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.56

Mail Stop PATENT APPLICATION
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Sir:

Applicants submit herewith on Form PTO/SB/08 a listing of the documents cited by or submitted to the U.S. PTO in parent application Serial No. 09/905,999, filed 07/17/2001, which is a continuation of application Serial No. 09/127,248, filed 07/31/1998, which is a continuation-in-part of application Serial No. 08/877,150, filed 06/17/1997. As provided in 37 CFR §1.98(d), copies of the documents are not being provided since they were previously submitted to the United States Patent & Trademark Office in the above-identified parent application.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), within three (3) months of the filing date of the application.

Applicants respectfully request that the listed documents be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date April 16, 2004

By 

FOLEY & LARDNER LLP

Customer Number: 22428

Telephone: (202) 672-5475

Facsimile: (202) 672-5399

Beth A. Burrous

Attorney for Applicant

Registration No. 35,087

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Prior Application Number	09/905,999
				Prior Appl. Filing Date	07/17/2001
				First Named Inventor	Axel Ullrich
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
Sheet	1	of	8	Attorney Docket Number	034536-1468

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	A1	4,945,050		SAMFORD et al.	07-31-1990	
	A2	5,283,173		FIELDS et al.	02-01-1994	

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
	A3	WO	93/09236	A1	BAYLOR COLLEGE OF MEDICINE	05-13-1993		
	A4	WO	94/23039	A1	THE INSTITUTE OF CANCER RESEARCH: ROYAL CANCER HOSPITAL	10-13-1994		
	A5	WO	96/18738	A2	SUGEN INC. et al.	06-20-1996		
	A6	WO	97/35019	A1	GENETECH INC.	09-25-1997		
	A7	WO	97/48723	A2	MAX-PLANCK-GESELLSCHAFT SUR FORDERUNG DER WISSENSCHAFTEN E.V.	12-24-1997		

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶	
	A8	ABE et al., "Molecular Characterization of a Novel Metabotropic Glutamate Receptor mGluR5 Coupled to Inositol Pohosphate/Ca ²⁺ Signal," <u>J. Biol. Chem.</u> 267(19):13361-13368(1992)		
	A9	Abstract from 94 th Annual Meeting of the American Gastroenterological Association, Boston, May 15-21 (1993)		
	A10	AOKI et al., "The Novel Protein-Tyrosine Phosphatase PTP20 Is a Positive Regulator of PC12 Cell Neuronal Differentiation," <u>J. Biol. Chem.</u> 271(46):29422-29426 (1996)		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Prior Application Number	09/905,999
				Prior Appl. Filing Date	07/17/2001
				First Named Inventor	Axel Ullrich
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
Sheet	2	of	8	Attorney Docket Number	034536-1468

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶	
	A11	BARFORD et al., "Crystal Structure of Human Protein Tyrosine Phosphatase 1B," <u>Science</u> 263:1397-1403 (1994)		
	A12	BECKER et al., "cDNA cloning and characterization of rat Clk3, a LAMMER kinase predominantly expressed in testis," <u>Biochim. Biophys. Acta</u> 1312(1):63-67 (1996)		
	A13	BECKMAN et al., "An Adhesive Domain Detected in Functionally Diverse Receptors," <u>Trends Biochem. Sci.</u> 18:40 (1993)		
	A14	BEN-DAVID et al., "A Mammalian Protein Kinase With Potential For Serine/Threonine and Tyrosine Phosphorylation is Related to Cell Cycle Regulators," <u>EMBO Journal</u> 10(2):317-325 (1991)		
	A15	BENDER et al., "AFC1, a LAMMER kinase from Arabidopsis thaliana, activates STE12-dependent processes in yeast," <u>Proc. Natl. Acad. Sci. USA</u> 91:12105-12109(1994)		
	A16	BLASCHUK et al., "Identification of a Conserved Region Common to Cadherins and Influenza Strain A. Hemagglutinins" <u>J. Mol. Biol.</u> 211, 679-682 (1990)		
	A17	BROWN-SHIMER et al., "Molecular cloning and chromosome mapping of the human gene encoding protein phosphotyrosyl phosphatase 1B," <u>Proc. Natl. Acad. Sci. USA</u> 87:5148-5152 (1990)		
	A18	CHAO, "Growth Factor Signaling: Where is the Specificity?" <u>Cell</u> 68:995-997 (1992)		
	A19	CHENG et al., "A Novel Protein Tyrosine Phosphatase Expressed in lin ^{lo} CD34 ^{hi} Sca ^{hi} Hematopoietic Progenitor Cells," <u>Blood</u> 88:1156-1167 (1996)		
	A20	CIOSEK et al., "Cloning, Characterization, and Differential Expression of MDK2 and MDK5, Two Novel Receptor Tyrosine Kinases of the Eck/Eph Family," <u>Oncogene</u> 11:2085-2095 (1995)		
	A21	COLWILL et al., "The Clk/Sty Protein Kinase Phosphorylates SR Splicing Factors and Regulates Their Intracellular Distribution," <u>The EMBO Journal</u> 15(2):265-275 (1996)		
	A22	COOL et al., "DNA Isolated from a Human T-cell Library Encodes a Member of the Protein-tyrosine-phosphatase Family," <u>Proc. Natl. Acad. Sci. USA</u> 86, 5257-5761 (1989)		
	A23	CUNNINGHAM et al., "Neural Cell Adhesion Molecule: Structure, immunoglobulin-Like Domains, Cell Surface Modulation, and Alternative RNA Splicing" <u>Science</u> 236, 799-806 (1987)		
	A24	CURIEL et al., "Gene Transfer to Respiratory Epithelial Cells via the Receptor-mediated Endocytosis Pathway," <u>Am. J. Respir. Cell. Mol. Biol.</u> 6, 247-252 (1992)		

Examiner Signature	Date Considered	
--------------------	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Prior Application Number	09/905,999
		Prior Appl. Filing Date	07/17/2001
		First Named Inventor	Axel Ullrich
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
(use as many sheets as necessary)		Attorney Docket Number	034536-1468
Sheet	3	of	8

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	A25	DIGNAM et al., "Accurate transcription initiation by RNA polymerase II in a soluble extract from isolated mammalian nuclei," <u>Nucleic Acids Research</u> , 1983, pp. 1475-1489, Vol. 11, No. 5	
	A26	DINGWALL et al., "Nuclear targeting sequences – a consensus," <u>TIBS</u> , December 1991, pp. 478-481, Vol. 16	
	A27	DUNCAN et al., "Alternative Splicing of STY, a Nuclear Dual Specificity Kinase*," <u>The Journal of Biological Chemistry</u> 270:21524-21531 (1995)	
	A28	EATON et al., "Construction and Characterization of an Active Factor VIII Variant Lacking the Central One-Third of the Molecule" <u>Biochemistry</u> 25(26) 8343-8347 (1986)	
	A29	<u>EMBL Accession No. U49853</u> , "Sequence Mus Musculus Protein Tyrosine Phosphatase nRNA, Complete cds", XP-002034266 (3/27/96)	
	A30	<u>EMBL Accession No. U55057</u> , "Mus Musculus Receptor Protein Tyrosine Phosphatase-Lambda (Ptp-Lambda) Mrna, Complete cds.," XP-002064044	
	A31	FENDLY et al., "Characterization of Murine Monoclonal Antibodies Reactive to Either the Human Epidermal Growth Factor Receptor or HER2/neu Gene Product," <u>Cancer Research</u> 50, 1550-1558 (1990)	
	A32	FIELD et al., "Cloning and Characterization of CAP, the S. Cerevisiae Gene Encoding the 70 kd Adenylyl Cyclase-Associated Protein" <u>Cell</u> 61:319-327 (1990)	
	A33	FLORES et al., "Nuclear Localization of the PEP Protein Tyrosine Phosphatase" <u>Mol. Cell. Biol.</u> 14:4938-4946 (1994)	
	A34	FRY et al., "New Insights into Protein-tyrosine Kinase Receptor Signaling Complexes," <u>Protein Science</u> 2:1785-1797 (1993)	
	A35	FU, "The superfamily of arginine/serine-rich splicing factors," <u>RNA</u> 1:663-680(1995)	
	A36	GARTON et al., "A.J. and Tonks, N.K., PTP-PEST: a protein tyrosine phosphatase regulated by serine phosphorylation", <u>EMBO J.</u> 13:3763-3771 (1994)	
	A37	GenBank Database Accession No. AA059682 (version GI: 1553435), Sept. 23, 1996, accessed 1/22/01	
	A38	GenBank Database Accession No. W89331 (version GI:1538524), Sept. 12, 1996, accessed 1/22/01	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Prior Application Number	09/905,999
				Prior Appl. Filing Date	07/17/2001
				First Named Inventor	Axel Ullrich
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
Sheet	4	of	8	Attorney Docket Number	034536-1468

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶	
	A39	HAMMER et al., "Spontaneous Inflammatory Disease in Transgenic Rats Expressing HLA-B27 and Human β_2m : An Animal Model of HLA-B27-Associated Human Disorders," <u>Cell</u> 63, 1099-1112(1990)		
	A40	HANES et al., "Characterization by cDNA Cloning of Two New Human Protein Kinases: Evidence by Sequence Comparison of a New Family of Mammalian Protein Kinases," <u>J. Mol. Biol.</u> 244(5):665-672 (1994)		
	A41	HARADA et al., "Selection of RNA-binding peptides in vivo," <u>Nature</u> 380:175-179 (1996)		
	A42	HEDLEY et al., "An Amino Acid Sequence Motif Sufficient for Subnuclear Localizaion of an Arginine/Serine-rich Splicing Factor" <u>Proc. Natl. Acad. Sci. USA</u> 92:11524-11528 (1995)		
	A43	HILLIER et al., Accession No. R54222. Genbank database. The WashU-Merck EST Project (18 May 1995).		
	A44	HOWELI et al., "STY, a Tyrosine-Phoshorylating Enzyme with Sequence Homology to Serine/Threonine Kinases," <u>Molecular and Cellular Biology</u> 11(1):568-572 (1991)		
	A45	JIANG et al., "The α Subunit of Merpron A" <u>J. of Biol. Chem.</u> 267:9185 (1992)		
	A46	JOHNSON and SMITH, "Molecular Cloning of a Novel Human cdc2/CDC28-like Protein Kinase," <u>J. Biol. Chem.</u> 266(6):3402-3407 (1991)		
	A47	JOHNSTON et al., "Isolation of the Yeast Regulatory Gene <i>Gal4</i> and Analysis of its Dosage Effects on the Galactose/melibiose Regulon," <u>Proc. Natl. Acad. Sci. USA</u> 79:6971-6975 (1982)		
	A48	KASPRZAK et al., "Location of a Contact Site Between Acting and Myosin in the Three-Dimensional Structure of the Acto-S1 Complex," <u>Biochemistry</u> 28, 9230-9238 (1989)		
	A49	KHARITONENKOV et al., "A Family Of Proteins That Inhibit Signalling Through Tyrosine Kinase Receptors," <u>Nature</u> 386:181-186 (1997)		
	A50	KILLEN et al., "Specific Killing of Lymphocytes that Cause Experimental Autoimmune Myasthenia Gravis by Ricin Toxin-Acetylcholine Receptor Conjugates," <u>J. of Immunol.</u> 133(5) 2549-2553 (1984)		
	A51	KIM et al, "Characterization of the PEST family protein tyrosine phosphatase BDP1," <u>Oncogene</u> 13(10):2275-2279 (1996)		
	A52	KOHTZ et al., "Protein-protein interactions and 5'-splice-site recognition in mammalian mRNA precursors," <u>Nature</u> 368:119-124(1994)		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Prior Application Number	09/905,999
				Prior Appl. Filing Date	07/17/2001
				First Named Inventor	Axel Ullrich
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
Sheet	5	of	8	Attorney Docket Number	034536-1468

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶	
	A53	KRUEGER et al., "A Human Transmembrane Protein-tyrosine-phosphatase, Ptp ζ, Is Expressed in Brain and Has an N-terminal Receptor Domain Homologous to Carbonic Anhydrases," <u>Proc. Natl. Acad. Sci. USA</u> 89, 7417-7421 (1992)		
	A54	LAMMERS et al., "Differential Activities of Protein Tyrosine Phosphatases in Intact Cells," <u>J. Biol. Chem.</u> 268, 22456-22462 (1993)		
	A55	LECHNER et al., "ERK6, a mitogen-activated protein kinase involved in C2C12 myoblast differentiation," <u>Proc. Natl. Acad. Sci. U.S.A.</u> 96:4355-4359 (1996)		
	A56	LU et al., "A human peptidyl-prolyl isomerase essential for regulation of mitosis," <u>Nature</u> 380:544-547 (1996)		
	A57	LUTZ et al., "The Distribution of Two hnRNP-Associated Proteins Defined by a Monoclonal Antibody Is Altered in Heat-Shocked HeLa Cells" <u>Exp. Cell Res.</u> 175, 109-124 (1988)		
	A58	MATTHEWS et al., "Characterization of Hematopoietic Intracellular Protein Tyrosine Phosphatases: Description of a Phosphatase Containing and SH2 Domain and Another Enriched in Proline-, Glutamic Acid-, Serine-, and Threonine-Rich Sequences" <u>Mol. Cell Biol.</u> 12(5) 2396-2405 (1992)		
	A59	MATVIW et al., "Identification of a Human cDNA Encoding a Protein That Is Structurally and Functionally Related to the Yeast Adenylyl Cyclase-Associated CAP Proteins" <u>Mol. Cell Biol.</u> 12(11) 5033-5040 (1992)		
	A60	MAURO et al., "Homophilic and Heterophilic Binding Activities of Nr-CAM, a Nervous System Cell Adhesion Molecule" <u>J. Cell Biol.</u> 119, 191-202 (1992)		
	A61	MCKNIGHT, "Functional Relationships between Transcriptional Control Signals of the Thymidine Kinase Gene of Herpes Simplex Virus," <u>Cell</u> 31, 355-365 (1982)		
	A62	MERMOUD et al., "Regulation of mammalian spliceosome assembly by a protein phosphorylation mechanism," <u>EMBO J.</u> 13:5679-5688 (1994)		
	A63	MILLAUER et al., "Glioblastoma Growth Inhibited <i>In Vivo</i> by a Dominant-negative Flk-1 Mutant," <u>Nature</u> 367:576-579 (1994)		
	A64	MIZUNO et al., "Developmental Regulation of Gene Expression for the MPTPδ Isoforms in the Central Nervous System and the Immune System" <u>FEBS</u> 355, 223 -228 (1994)		
	A65	NAYLER et al., "Characterization and comparison of four serine- and arginine-rich (SR) protein kinases," <u>Biochem. J.</u> , 326:693-700 (1997)		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known	
		Prior Application Number Prior Appl. Filing Date First Named Inventor Group Art Unit Examiner Name Attorney Docket Number	09/905,999 07/17/2001 Axel Ullrich Unassigned Unassigned 034536-1468
Sheet	6	of	8

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	A66	NAYLER et al., "SAF-B Protein Couples Transcription and Pre-Mrna Splicing to SAR/MAR Elements" <u>Nucl. Acid. Res.</u> 26(15) 3542-3549 (1998)	
	A67	NELSON et al., "Detection of acridinium esters by chemiluminexence," <u>Nonisotopic DNA Probe Tehcniques</u> , 1992, pp. 275-310	
	A68	OTA et al., <u>Proc. Natl. Acad. Sci.</u> , 89, 2355-2359, March 1992	
	A69	<u>PCR Protocols: A Guide to Methods and Applications</u> , edited by Michael Innis et al., Academic Press, San Diego (1990) (TABLE OF CONTENTS ONLY)	
	A70	PUISSANT et al., "An Improvement of the Single-Step Method of RNA Isolation by Acid Guanidinium Thiocyanate-Phenol-Chloroform Extraction," <u>BioTechniques</u> , 1990, pp. 148-149, Vol. 8, No. 2	
	A71	REDEMANN et al., "Anti-Oncogenic Activity of Signalling-Defective Epidermal Growth Factor Receptor Mutants," <u>Mol. and Cell. Biol.</u> 2(2) 491-498 (1992)	
	A72	ROGERS et al., "Amino Acid Sequences Common to Rapidly Degraded Proteins: The PEST Hypothesis" <u>Science</u> 234:364-368 (1986)	
	A73	SAITO and STREULI, "Molecular Characterization of Protein Tyrosine Phosphatases," <u>Cell Growth & Differentiation</u> 2(1):59-65 (1991)	
	A74	SAMBROOK et al., <u>Molecular Cloning: A Laboratory Manual</u> , 2 nd Edition, Cold Spring Harbor Laboratory Press (1989) (TABLE OF CONTENTS ONLY – ALL THREE VOLUMES)	
	A75	SANGER et al., "DNA sequencing with chain-terminating inhibitors," <u>Proc. Natl. Acad. Sci. USA</u> , December 1977, pp. 5462-5467, Vol. 74, No. 12	
	A76	SCHLESSINGER and ULLRICH, "Growth Factor Signalling by Receptor Tyrosine Kinases," <u>Neuron</u> 9:383-391 (1992)	
	A77	SMITH et al., "Single-step Purification of Polypeptides Expressed in Escherichia Coli as Fusions with Glutathione S-transferase" <u>Gene</u> , 67:31-40 (1988)	
	A78	STAKNIS et al., "SR proteins promote the first specific recognition of pre-mRNA and are present together with the U1 small nuclear ribonucleoprotein particle in a general splicing enhancer complex," <u>Mol. Cell. Biol.</u> 14:7670-7682 (1994)	
	A79	STEIN-GERLACH et al., "Protein-tyrosine Phosphate 1D Modulates Its Own State of Tyrosine Phosphorylation" <u>J. Biol. Chem.</u> 270:24635 (1995)	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Prior Application Number	09/905,999
				Prior Appl. Filing Date	07/17/2001
				First Named Inventor	Axel Ullrich
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
Sheet	7	of	8	Attorney Docket Number	034536-1468

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶	
	A80	STUCKEY et al., "Crystal Structure of Yersinia Protein Tyrosine Phosphatase at 2.5 Å and the Complex with Tungstate" <u>Nature</u> 370:571-575 (1994)		
	A81	SU et al., "The Crystal Structure of a Low-Molecular-Weight Phosphotyrosine Protein Phosphatase" <u>Nature</u> 370, 575-578 (1994)		
	A82	TAKEKAWA et al., "Cloning and characterization of a human cDNA encoding a novel putative cytoplasmic protein-tyrosine-phosphatase," <u>Biochem. Biophys. Res. Commun.</u> 189:1223-1230 (1992)		
	A83	THOMAS et al., "Structural Modification of Acidic Fibroblast Growth Factor Alter Activity, Stability, and Heparin Dependence" <u>Ann. NY Acad. Sci.</u> 9-17 (1991)		
	A84	TOMIC et al., "Association of SH2 Domain Protein Tyrosine Phosphatases with the Epidermal Growth Factor Receptor in Human Tumor Cells: Phosphatidic Acid Activates Receptor Dephosphorylation by PTP1C," <u>J. Biol. Chem.</u> 270:21277-21284 (1995)		
	A85	ULLRICH et al., "Rat Insulin Genes: Construction of Plasmids Containing the Coding Sequences" <u>Science</u> 196:1313-1319 (1977)		
	A86	VOGEL et al., "Activation of a Phosphotyrosine Phosphatase by Tyrosine Phosphorylation," <u>Science</u> 259:1611-1614 (1994)		
	A87	VOJTEK et al., "Mammalian Ras Interacts Directly with the Serine/Threonine Kinase Raf," <u>Cell</u> 74:205-214 (1993)		
	A88	WANG et al., "Characterization of PCP-2, a Novel Receptor Protein Tyrosine Phosphatase of the MAM Domain Family," <u>Oncogene</u> 12(12):2555-2562 (1996)		
	A89	WARD et al., "Construction and Characterisation of a Series of Multi-copy Promoter-probe Plasmid Vectors for <i>Streptomyces</i> Using the Aminoglycoside Phosphotransferase Gene from Tn5 as Indicator," <u>Mol. Gen. Genet.</u> 203, 468-478 (1986)		
	A90	WINFIELD et al., "Identification of Three Additional Genes Contiguous to the Glucocerebrosidase Locus on Chromosome 1q21: Implications for Gaucher Disease," <u>Genome Research</u> 7(10):1020-1026 (1997)		
	A91	WU et al., "Molecular Cloning of a Transcriptional Repressor Protein (SIRP-1) Which Binds to the Intestine-Specific Promoter Region of the Sucrase-Isomaltase Gene," <u>Gastroenterology</u> 104(4, part 2):A290 abstract (1993)		
	A92	YAMAUCHI et al., "Epidermal Growth Factor Induced Association of the SHPTP2 Protein Tyrosine Phosphatase with a 115-kDa Phosphotyrosine Protein" <u>J. Biol. Chem.</u> 270:14871-14874 (1995)		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Prior Application Number	09/905,999
(use as many sheets as necessary)				Prior Appl. Filing Date	07/17/2001
				First Named Inventor	Axel Ullrich
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
Sheet	8	of	8	Attorney Docket Number	034536-1468

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶	
	A93	YAMAUCHI et al., "Identification of the Major SHPTP2-binding Protein That is Tyrosine-phosphorylated in Response to Insulin" <u>J. Biol. Chem.</u> 270:17716-17722 (1995) -		
	A94	YANG et al., "Cloning and Expression of PTP-PEST a Novel, Human, Nontransmembrane Protein Tyrosine Phosphatase," <u>J. Biol. Chem.</u> 268(9):6622-6628 (1993)		
	A95	YUN et al., "The <i>Doa</i> Locus Encodes a Member of a New Protein Kinase Family and is Essential for Eye and Embryonic Development in <i>Drosophila Melanogaster</i> ," <u>Genes & Development</u> 8:1160-1173(1994)		
	A96	ZAHLE et al., "SR Proteins: a Conserved Family of Pre-mRNA Splicing Factors," <u>Genes & Development</u> 6:837-847 (1992)		
	A97	ZELICOF et al., "Molecular Cloning and Characterization of a Rat Homolog of CAP, The Adenylyl Cyclase-Associated Protein From <i>Saccharomyces Cerevisiae</i> " <u>J. of Biol. Chem.</u> 268(18) 13448-13453 (1993)		
	A98	ZHANG, et al., "Dissecting the Catalytic Mechanism of Protein Tyrosin Phosphatases" <u>Proc. Natl. Acad. Sci. USA</u> 91:1624-1627 (1994)		

Examiner Signature		Date Considered	
---------------------------	--	------------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.